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EXAMINER

HERNANDEZ, NELSON D

ART UNIT

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/696,567	<b>Applicant(s)</b> PILU ET AL.	
	<b>Examiner</b> NELSON D. HERNANDEZ	<b>Art Unit</b> 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-5,7,10-25,28-38,40,42,44-47,51-54 and 56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5,7,10-25,28-38,40,42,44-47,51-54 and 56 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

1. The Examiner acknowledges the amended claims filed on February 11, 2009. **Claims 1, 21 and 54** have been amended. **Claims 6, 8, 9, 26, 27, 39, 41, 43, 48-50, 55 and 57-60** have been cancelled.

### *Response to Arguments*

2. Applicant's arguments with respect to **claims 1 and 21** have been considered but are moot in view of the new grounds of rejection based on previously presented prior art.
3. Applicant's arguments with respect to **claim 54** have been considered but are moot in view of the new grounds of rejection.
4. Applicant's arguments filed February 11, 2009 have been fully considered but they are not persuasive. The Applicant argues the following:
  - a. Takahashi fails to teach, disclose or suggest at least "saliency circuitry for automatically generating an image related second saliency signal in response to the image signal"

The Office Action contends that Takahashi teaches this as follows:

saliency circuitry for automatically generating an image related second saliency signal in response to the image signal (Takahashi further teaches that the auxiliary information includes a degree of importance of said persons appearing in the image data, and that

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said degree of importance can be determined based on the time length of a scene where a particular person set by the user appear; see page 8 ¶ 0119.)

(*Office Action*, p. 8-9, *emphasis added*.)

Applicant respectfully disagrees. In Takahashi, the user inputs the degree of importance: the user creates tags or button labels in advance (e.g., "son", "daughter", "exciting" etc.) and then the user enters a value for these labels while the scene is being captured. Although this point is not explicit with regard to person-in-the-scene tags, Takahashi makes this clear when discussing a "degree of importance" value for the "exciting" tag:

The simplest method of setting the value of exciting is setting the value of importance at either "0" (=not important) or "1" (=most important). However, one of the value buttons shown in the menu on the monitor or the menu in the viewfinder may be selected by the menu method, i.e., in the same manner as that described for the case of answering to a question as to whether the type of auxiliary information should be selected or not. **At this time, values in increments of "0.1" may be inputted between "0" and "1" by combination of pressing the power key and the recording key, and one of these values may be selected.**

Alternatively, when an exciting button is provided at the upper surface of the body of the combined camera and VTR, **the user may input a value of exciting** by operating this button.

Furthermore, a value of exciting may be inputted by sensing the degree of exciting of the user from the fingers of the user which are put on a pressure sensor or a sweat sensor provided at the upper surface of the body.

(*Takahashi*, para. 0119, *emphasis added*.)

Thus, even assuming (for the sake of argument) that the degree of importance of a person in the scene is an "image related second saliency signal", Takahashi does not teach "automatically generating" this signal.

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➤ The Examiner disagrees with the Applicant. However, that Examiner would like to point out that Takahashi teaches that the saliency signal can be either input by the user as well as automatically generated by the camera upon detection of excitement of the user using either a pressure sensor or a sweat sensor provided in the camera so that the camera would automatically assign a "degree of importance" based on the detected excitement of the user as also discussed in ¶ 0119. Therefore, the Examiner understands that Takahashi discloses "saliency circuitry for automatically generating an image related second saliency signal in response to the image signal" as claimed since the "degree of interest" is automatically generated upon measuring the excitement of the user while capturing the image signal.

b. Takahashi fails to teach, disclose or suggest at least "circuitry for combining said saliency signals to provide a complex saliency signal"

The Office Action contends that Takahashi teaches this as follows:

circuitry for combining said saliency signals to form a complex saliency signal (Takahashi discloses that the auxiliary information has persons information and degree of importance of said persons and that the auxiliary information is stored with the image signal and further discloses that the camera would also display the auxiliary information on a display screen (As shown in figs. 23, the user would set the auxiliary information and the set auxiliary information would be displayed in the display as shown in figs. 25 and 26 (see persons information and the degree of importance displayed on the display); page 87 I] 0117 - page 9, I] 0124)) (***This teaches the combination of the two saliency signals (the persons information and the degree of importance information stored/displayed together in association with the image) to create a complex saliency signal*** as claimed .) (Office Action, p. 8-9, emphasis added.)

Applicant respectfully disagrees with the contention. Applicant assumes (for the sake of argument) that the person-of-interest information and the degree-of-importance information are each a "saliency signal". Even so, Takahashi does not teach or suggest "combining" these two pieces of information. Takahashi merely teaches storing these two pieces of information, which Applicant respectfully submits is not the same as "combining" as recited in claim 44.

Furthermore, even assuming (for the sake of argument) that storing these two pieces of information is the same as combining them, Applicant respectfully that the stored information is not "complex" as recited in claim 44.

➤ The Examiner disagrees with the Applicant. As discussed in the previous Office Action, Takahashi discloses that the saliency signals (wherein the Examiner is interpreting the person information and the degree of importance as saliency signals) are displayed together (See figs. 20(a) and 26(b)). Therefore, by at least teaching that the person information and the degree of importance are displayed together in the display of the camera, Takahashi teaches combining the signals to create a complex signal that is used for creating a display signal to inform the user about the person information and the degree of importance in the video being displayed. Therefore, the Examiner understands that Takahashi discloses "circuitry for combining said saliency signals to provide a complex saliency signal" as claimed.

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c. Claim 54 is amended to recite "a picture taking control for selectively activating the electronic camera to store an image to a memory and...picture selection circuitry for selectively passing the image to the memory in response to the saliency signal" (emphasis added). Applicant respectfully submits that Metcalfe fails to teach, disclose or suggest at least this feature.

Metcalfe discloses a video camera 101 with a level of interest (LOI) button 112, through which a user inputs his subject level of interest in content as it records.

(p. 4, lines 25-30.) The LOI is stored along with the content. (p. 5, lines 5-10.)

Metcalfe teaches that the LOI information is used during playback:

The LOI information can be used in a number of ways during playback of the video frames. In one embodiment, the speed of playback is a function of the LOI signal from the frame currently being replayed.  
(p. 5 lines 15-20.)

As shown in Fig. 3, the use can select an LOI threshold, whereby a replay controller controls the replay apparatus such that only video frames having an LOI above the selected threshold are replayed..  
(p. 5 lines 15-20.)

The LOI signals associated with the video frames can also be used to automatically produce a printout of relatively interesting parts of the tape. (p. 5 lines 15-20.)

But even assuming (for the sake of argument) that the LOI information is a saliency signal, the LOI information is not used to control the storing of images.

In contrast, in the embodiment defined by amended claim 54 the saliency signal affects the storage of images: "a picture taking

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control for selectively activating the electronic camera to store an image to a memory .... and picture selection circuitry for selectively passing the image to the memory in response to the saliency signal"

➤ The Examiner acknowledges that the above mentioned newly presented limitations are not taught in the Metcalfe reference. However, a new ground of rejection has been made in view of a teaching found in the Takahashi reference, which is now presented to modify the teaching of Metcalfe to show the limitations as discussed in the rejections under 35 USC 103 as discussed in this Office Action.

d. Applicant assumes (for the sake of argument) that the level of interest (LOI) signal in Metcalfe corresponds to a saliency signal. Metcalfe teaches that the LOI can have a range of values (p. 4 lines 30-32) or can be essentially continuous (p. 4 line 33 to p. 5 line 3). However, Metcalfe does not disclose "providing a maximum value" for the LOI signal, and certainly not that this maximum value is provided "contemporaneously with activation of the picture taking control".

Applicant further assumes (for the sake of argument) that the auxiliary information in Takahashi corresponds to a saliency signal. Takahashi teaches that the type of auxiliary information and the value of this information are both input by a user. (See Fig. 23(a) and para. 0119.) However, Takahashi does not disclose "providing a maximum value" for the auxiliary information and certainly



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not that this maximum value is provided "contemporaneously with activation of the picture taking control".

➤ The Examiner disagrees. The Examiner noted that Metcalfe further discloses that the record button 112 and the button 111 can be combined into a single combination key, and depressing the combination key starts the recording of video while subsequent pressure applied by the user generates a LOI signal for recording with the captured video frames (See page 6, lines 6-12). It is noted that the word "contemporaneous" is defined as "*Originating, existing, or happening during the same period of time*" (Definition from "The American Heritage® Dictionary of the English Language", Fourth Edition, 2000). Therefore, by teaching that the combination button is initially depress for activation while a subsequent pressure applied by the user that in response the camera would assign a particular LOI to the video frames being recorded, Metcalfe discloses "a circuit for providing a maximum value for the saliency signal contemporaneously with activation of the picture taking button" as claimed since even if the LOI is not assign at the same time, the LOI is assign at a time that can be considered to be occurring during a particular period of time. Therefore, the Examiner understands that the combined teaching of Metcalfe in view of Takahashi as discussed and analyzed in claims 1 and 21 teaches all the limitations as presented.

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e. Applicant respectfully submits that claims 1, 3-5, 10-21, 23-25, 28-38, 40, and 42 are allowable for at least the reason that the proposed combination of Metcalfe in view of Takahashi does not disclose, teach, or suggest at least the feature of "saliency circuitry for combining said first and second saliency signals to form a complex saliency signal". The Office Action acknowledges that Metcalfe does not explicitly disclose this feature, but contends that Takahashi teaches the feature as follows:

circuitry for combining said saliency signals to form a complex saliency signal (Takahashi discloses that the auxiliary information has persons information and degree of importance of said persons and that the auxiliary information is stored with the image signal and further discloses that the camera would also display the auxiliary information on a display screen (As shown in figs. 23, the user would set the auxiliary information and the set auxiliary information would be displayed in the display as shown in figs. 25 and 26 (see persons information and the degree of importance displayed on the display); page 87 I[ 0117 - page 9, I[ 0124)) (***This teaches the combination of the two saliency signals (the persons information and the degree of importance information stored-displayed together in association with the image)*** to create a complex saliency signal as claimed .) (Office Action, p. 8-9, emphasis added.)

Applicant respectfully disagrees with the contention. Applicant assumes (for the sake of argument) that the person-of-interest information and the degree-of-importance information are each a "saliency signal". Even so, Takahashi does not teach or suggest "combining" these two pieces of information. Takahashi merely teaches storing these two pieces of information, which Applicant respectfully submits is not the same as "combining" as recited in claim 40.

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➤ The Examiner disagrees with the Applicant. As discussed in the previous Office Action, Takahashi discloses that the saliency signals (wherein the Examiner is interpreting the person information and the degree of importance as saliency signals) are displayed together (See figs. 20(a) and 26(b)). Therefore, by at least teaching that the person information and the degree of importance are displayed together in the display of the camera, Takahashi teaches combining the signals to create a complex signal that is used for creating a display signal to inform the user about the person information and the degree of importance in the video being displayed. Therefore, the Examiner understands that Takahashi discloses "circuitry for combining said saliency signals to provide a complex saliency signal" as claimed.

f. Applicant respectfully submits that claims 51-53 are allowable for at least the reason that Takahashi does not disclose, teach, or suggest at least the feature of "a buffer for receiving the input picture signals and having a capacity for the input picture signals determined in response to the value of the saliency signal". The Office Action contends that Takahashi teaches this feature as follows:

By teaching adjusting the amount of data to be transmitted based on the length allowed for transmission and also based on the priority of the video signals to be transmitted, Takahashi inherently discloses "a buffer for receiving said image signal, the buffer having a capacity arranged to be controlled by the value of the saliency signal during operation of the camera apparatus" as claimed since the amount being adjusted in the apparatus needs to be in a particular buffer or memory prior to transmission in order to properly

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select the video signals with higher priority). Takahashi further discloses that by adjusting the amount of data to be transmitted based on the length allowed for transmission and also based on the priority of the video signals to be transmitted the camera may select as many as possible the most important video signals from the video data for transmission.  
(Office Action, p. 44.)

Applicant assumes the following for the sake of argument: that Takahashi teaches "adjusting the amount of data to be transmitted based on the length allowed for transmission and also based on the priority of the video signals to be transmitted"; that Takahashi inherently includes a buffer to store this data; and that the priority of the video signals corresponds to the claimed "saliency signal". Even so, the conclusion drawn in the Office Action from these premises is faulty: the mere presence of a buffer to store data for transmission and the (assumed) fact that the amount of data transmitted is adjusted does **not** necessarily lead to the conclusion that the capacity of the buffer is controlled by the value of the saliency signal. It is also possible that the amount of data stored in the buffer is completely unrelated to the saliency, and only the amount of data transmitted is controlled by the saliency. According to well-established Federal case law, "Anticipation by inherent disclosure is appropriate only when the reference discloses prior art that must necessarily include the unstated limitation." *Atofina v. Great Lakes Chemical Corp.*, 441 F.3d 991, 1000 (Fed. Cir. 2006). Since Applicant has demonstrated that Takahashi does not necessarily include the claimed feature, the finding of inherency is inadequate in showing why "a buffer...having a capacity for the input picture signals determined in response to

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the value of the saliency signal" is "necessarily present" in the reference.

Consequently, the conclusion drawn in the Office Action not adequately supported, and the rejection of claim 51 should be withdrawn.

➤ The Examiner notes that it is possible that an amount of data stored in a buffer is completely unrelated to the saliency as argued by the Applicant. However, As discussed and analyzed in the previous Office Action, in the embodiment of Takahashi used to teach the limitations in question, Takahashi teaches a transmission process in which the amount of data to be transmitted is determined based on the cost of transmission service, thus wherein the allowed length of data (L) is determined and compared to the amount of data to be transmitted, and if the amount of data to be transmitted exceeds the determined amount of data allowed for transmission (See fig. 47) the apparatus would select video section with a priority higher than a threshold value. If after selecting those video with the priority higher than a threshold, the length of data still more than the allowed length, the apparatus would increase the priority threshold, however, if the length is less than the allowed length, the video signals are transmitted (Page 12, ¶ 0151-0154). It is noted by the Examiner by controlling the length of data to be transmitted, an amount of data need to be measured in memory in order to be compared, this teaches the use of a buffer of a memory section working as a buffer that is required to perform said control of data length and comparison of the selected data with said data length, which could be a section of the main memory or a separate memory, since that separate memory (buffer)

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or section in the memory includes a particular amount of data from the selected data to be measured for comparison with the allowed length of data for transmission. Furthermore, by teaching controlling said amount of data (which is determined based on the priority of data in response to the allowed length of data for transmission) to be transmitted based on the allowed length of data for transmission (which is determined on cost of transmission), Takahashi discloses the use of a buffer for receiving the input picture signals and having a capacity for the input picture signals determined in response to the value of the saliency signal since based on the importance of the data, the capacity of a section of the buffer (section of memory or separate memory as discussed above) for transmission is controlled. Therefore, the Examiner understands that the Takahashi reference teaches the limitations as presented.

g. Applicant notes that the Office Action specifically relies (p. 44) on an alleged finding of inherency for a teaching of the claimed feature noted above. However, Applicant also notes that the rejection is an obviousness rejection under §103 rather than an anticipation rejection under §103. It is therefore unclear to Applicant whether the rejection of claim 51 also relies on the knowledge of a person of ordinary skill in the art (see p. 10) for teaching "a buffer...having a capacity for the input picture signals determined in response to the value of the saliency signal". To the extent that the rejection relies on the knowledge of a person of ordinary skill in the art instead of inherency for teaching

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this claimed feature, Applicant respectfully submits that this claimed feature is not something within such a person's knowledge. Accordingly, the proposed combination of Takahashi in view of the knowledge of a person of ordinary skill in the art does not teach at least the claimed feature noted above that is recited in claim 51. Therefore, a prima facie case establishing an obviousness rejection has not been made, and the rejection should be withdrawn.

➤ The Examiner would like to point out that the rejection of claim 51 has been made as an obviousness rejection under §103. Note that the Examiner is using two different embodiments from the Takahashi reference (first and third embodiments as shown in the Takahashi references). The teaching of a buffer for receiving the input picture signals and having a capacity for the input picture signals determined in response to the value of the saliency signal has been addressed as being inherent in one of the embodiments of the Takahashi reference (third embodiment) as required to perform said control of data amount to be transmitted since a buffer, memory or section in main memory is required to perform the selection of the image data for comparison to adjust the amount of data for transmission based on the priority of the image signal. Thus, the teaching of “a buffer for receiving the input picture signals and having a capacity for the input picture signals determined in response to the value of the saliency signal” has not been taught relying with the use of Official Notice or on the knowledge of a person of ordinary skill in the art. The limitations of claim 51 have been rejected as being obvious over one of the embodiments (third) of

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Takahashi in combination with a different embodiment (first) of Takahashi that does not teach such limitations. The Examiner understands that modifying the first embodiment of Takahashi with the teaching of the third embodiment of Takahashi would provide the benefit of allowing selection of as many as possible the most important video signals from the video data for transmission as suggested by Takahashi (Page 12, ¶ 0154) (As discussed in the previous Office Action). Therefore, the Examiner understands that the combined teaching of the first and third embodiments in Takahashi teaches the limitations of claim 51 as presented.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**6. Claims 44-47 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi, US 2002/0041757 A1.**

**Regarding claim 44**, Takahashi discloses an imaging system comprising an electronic camera (See figs. 4(a), 4(b), 8, 9(a), 9(b), 10, and 11) for producing an image signal, a physically or mechanically operable user control (Takahashi discloses the use of buttons 109 to set auxiliary information (which the Examiner is interpreting as the saliency information) related to the image data being captured; page 6, ¶ 0106.



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Takahashi further discloses the use of a pressure sensor 109a and sweat sensor 109b to determine the auxiliary information related to the image data (page 6, ¶ 0112 – page 7, ¶ 0114) for receiving an input from a user and for generating a first saliency signal while the image signal is being produced (Takahashi further discloses that the auxiliary information includes information related to the persons (i.e. son, daughter, friend, father, mother) (see figs. 23(a) and 23 (b); page 8, ¶ 0117 - page 9, ¶ 0124)) for receiving an input from a user and for generating, in response to the input from the user a saliency signal (auxiliary information having information such as persons information)), saliency circuitry for automatically generating an image related second saliency signal in response to the image signal (Takahashi further teaches that the auxiliary information includes a degree of importance of said persons appearing in the image data, and that said degree of importance can be determined based on the time length of a scene where a particular person set by the user appear; see page 8, ¶ 0119.), and circuitry for combining said saliency signals to form a complex saliency signal (Takahashi discloses that the auxiliary information has persons information and degree of importance of said persons and that the auxiliary information is stored with the image signal and further discloses that the camera would also display the auxiliary information on a display screen (As shown in figs. 23, the user would set the auxiliary information and the set auxiliary information would be displayed in the display as shown in figs. 25 and 26 (see persons information and the degree of importance displayed on the display); page 8, ¶ 0118 – page 9, ¶ 0124)) (This teaches the combination of the two saliency signals (the

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persons information and the degree of importance information stored/displayed together in association with the image) to create a complex saliency signal as claimed.).

**Regarding claim 45**, Takahashi discloses that the operation of at least a part of the electronic camera is arranged to be controlled in response to the complex saliency signal (Takahashi discloses that the auxiliary information has persons information and degree of importance of said persons and that the auxiliary information is stored with the image signal and further discloses that the camera would also display the auxiliary information on a display screen (As shown in figs. 23, the user would set the auxiliary information and the set auxiliary information would be displayed in the display as shown in figs. 25 and 26 (see persons information and the degree of importance displayed on the display); page 8, ¶ 0118 – page 9, ¶ 0124)) being arranged to be controlled in response to the saliency signal (based on the auxiliary information the display would display the auxiliary information as shown in figs. 25 and 26).

**Regarding claim 46**, Takahashi discloses a separate user operable picture taking control for permitting enabling the electronic camera to take pictures (shooting button 104 as shown in fig. 4 (b)).

**Regarding claim 47**, Takahashi discloses that the first saliency signal can have more than two values (As shown in figs. 23 (a) and 23 (b), Takahashi discloses that more than one person can be selected (i.e. the son and the daughter); page 8, ¶ 0119).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1, 3-5, 10-21, 23-25, 28-38, 40, 42, 54 and 56 are rejected under 35 U.S.C. 103(a) as being unpatentable over Metcalfe, AU 743216 B in view of Takahashi, US 2002/0041757 A1.**

**Regarding claim 1**, claim 1 recites "... a saliency signal that (a) can change in value between at least three different discrete values while the image signal is being produced, or (b) can have values that are continuously variable while the image signal is being produced". It is noted by the Examiner that the term "can" is non-limiting and therefore has not been given patentable weight during examination of the claims on their merits. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. MPEP §2106.

The subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does

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not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:

- (A) statements of intended use or field of use,
- (B) “adapted to” or “adapted for” clauses,
- (C) “wherein” clauses, or
- (D) “whereby” clauses.

This list of examples is not intended to be exhaustive. See also MPEP § 2111.04.

USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted “in view of the specification” without importing limitations from the specification into the claims unnecessarily). In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550- 551 (CCPA 1969). See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (“During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow.... The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.”).

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Metcalfe discloses a camera apparatus (See fig. 1) comprising an electronic camera (See fig. 1) for producing an image signal, a user operable picture taking control (111 as shown in fig. 1) for selectively activating the electronic camera to take pictures, and an additional physically or mechanically operable user control (112 as shown in fig. 1, note that the limitations “an additional physically or mechanically operable user control” are written as optional elements by using the word “or”) for receiving an input from a user and for generating, in response to the input from the user a saliency signal (Metcalfe discloses generating a level of interest (LOI) set by the user when using button 112) that (a) can change in value between at least three different discrete values while the image signal is being produced (Metcalfe discloses assigning a level of interest to the image data being recorded, wherein the user can variably assign a plurality of level of interest through the capture of the a video sequence; see Fig. 3. This teaches generating a saliency signal that can change in value between at least three different discrete values while the image signal is being produced), or (b) can have values that are continuously variable while the image signal is being produced (Metcalfe discloses assigning a level of interest to the image data being recorded, wherein the user can variably assign a plurality of level of interest through the capture of the a video sequence; see Fig. 3. This teaches generating a saliency signal that can have values that are continuously variable while the image signal is being produced), a circuit for providing a maximum value for the saliency signal contemporaneously with activation of the picture taking button (Metcalfe further discloses that the record button 112 and the button 111 can be combined into a single combination key, and depressing

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the combination key starts the recording of video while subsequent pressure applied by the user generates a LOI signal for recording with the captured video frames (See page 6, lines 6-12). It is noted that the word "contemporaneous" is defined as "*Originating, existing, or happening during the same period of time*" (Definition from "The American Heritage® Dictionary of the English Language", Fourth Edition, 2000). Therefore, by teaching that the combination button is initially depressed for activation while a subsequent pressure applied by the user that in response the camera would assign a particular LOI to the video frames being recorded, Metcalfe discloses "a circuit for providing a maximum value for the saliency signal contemporaneously with activation of the picture taking button" as claimed since even if the LOI is not assigned at the same time, the LOI is assigned at a time that can be considered to be occurring during a particular period of time), and a memory (120 as shown in fig. 1) arranged for storing the image signal and the saliency signal (page 4, lines 5-13; page 5, lines 4-35), operation of at least a part of the camera apparatus while the electronic camera is activated to take pictures (Metcalfe discloses setting the LOI while the camera is activated to take pictures, and storing said LOI associated with the images so that said LOI can be used to control the reproduction of the images (i.e. printing, creating thumbnail files for photo albums, etc.)) being arranged to be controlled in response to the saliency signal (as discussed in page 6, line 31 – page 7, line 8, Metcalfe discloses that the saliency signal (LOI) can be used to control the reproduction of the images (i.e. printing, creating thumbnail files for photo albums, etc.)) (See page 4, line 5 – page 5, line 23; page 6, line 23 – page 7, line 8).

Metcalf does not explicitly disclose that the operation in response to the saliency signal is in addition to recording the saliency signal in the memory.

However, Takahashi discloses an electronic camera (See figs. 4(a), 4(b), 8, 9(a), 9(b), 10, and 11) producing image signal, comprising a user operable picture taking control (shooting button 104 as shown in fig. 4 (b)) for selectively activating the electronic camera to take pictures, and an additional operable user control (Takahashi discloses the use of buttons 109 to set auxiliary information (which the Examiner is interpreting as the saliency information) related to the image data being captured; page 6, ¶ 0106. Takahashi further discloses the use of a pressure sensor 109a and sweat sensor 109b to determine the auxiliary information related to the image data (page 6, ¶ 0112 – page 7, ¶ 0114). Also Takahashi discloses that the auxiliary information includes information related to the persons (i.e. son, daughter, friend, father, mother) and a degree of importance of said persons appearing in the image data (see figs. 23(a) and 23 (b); page 8, ¶ 0117 - page 9, ¶ 0124)) for receiving an input from a user and for generating, in response to the input from the user a saliency signal (auxiliary information having information such as persons information and degree of importance of the persons in the image) that (a) can change in value between at least three different discrete values while the image signal is being produced (as shown in figs. 23(a) and 23(b), the persons information and degree of importance of the persons in the image can change in value between a plurality of values (i.e. three or more values as claimed)), or (b) can have values that are continuously variable while the image signal is being produced (the auxiliary information can be changed during the capture of the

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image signal), and a memory (13) arranged for storing the image signal and the saliency signal (Takahashi further teaches storing the auxiliary information in the header of the scene; page 8, ¶ 0123 – page 9, ¶ 0126), operation of at least a part of the camera apparatus while the electronic camera is activated to take pictures (Takahashi discloses recording the auxiliary information and further discloses that the camera would also display the auxiliary information on a display screen (As shown in figs. 23, the user would set the auxiliary information and the set auxiliary information would be displayed in the display as shown in figs. 25 and 26; page 8, ¶ 0118 – page 9, ¶ 0124)) being arranged to be controlled in response to the saliency signal (based on the auxiliary information the display would display the auxiliary information as shown in figs. 25 and 26), the operation in response to the saliency signal is in addition to recording the saliency signal in the memory (The Examiner is interpreting displaying the auxiliary information using the display of the camera as the operation that is in addition to recording the saliency signal in the memory as claimed). Displaying the auxiliary information while capturing the image data is advantageous because it would provide the user with a user friendly interface that would allow changing the degree of importance of the images being captured and would also allow the user to be aware of the information being added to the image data.

Therefore, taking the combined teaching of Metcalfe in view of Takahashi as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of having the camera further displaying the salient signal being assign to the image data as taught in Takahashi to modify the



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teaching of Metcalfe to perform an operation in response to the saliency signal in addition to recording the saliency signal in the memory. The motivation to do so would have been to provide the user with a user friendly interface that would allow changing the degree of importance of the images being captured and would also allow the user to be aware of the information being added to the image data.

**Regarding claim 3**, the combined teaching of Metcalfe in view of Takahashi as discussed and analyzed in claim 1 further teaches that wherein said part includes a buffer for receiving said image signal, the buffer having a capacity arranged to be controlled by the value of the saliency signal during operation of the camera apparatus (In a further embodiment, Takahashi discloses the concept of determining the amount of data to be transmitted based on the cost of transmission service; wherein the allowed length of data (L) is determined and compared to the amount of data to be transmitted, if the amount of data to be transmitted the apparatus would select video section with a priority higher than a threshold value. If after selecting those video with the priority higher than a threshold, the length of data still more than the allowed length, the apparatus would increase the priority threshold, however, if the length is less than the allowed length, the video signals are transmitted (Page 12, ¶ 0151-0154). By teaching adjusting the amount of data to be transmitted based on the length allowed for transmission and also based on the priority of the video signals to be transmitted, Takahashi inherently discloses “a buffer for receiving said image signal, the buffer having a capacity arranged to be controlled by the value of the saliency signal during

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operation of the camera apparatus” as claimed since the amount being adjusted in the apparatus needs to be in a particular buffer or memory prior to transmission in order to properly select the video signals with higher priority). One of an ordinary skill in the art would have found obvious to apply the concepts of adjusting the amount of data to be transmitted based on the priority set to the video signals to further modify the camera apparatus to have a buffer for receiving said image signal, the buffer having a capacity arranged to be controlled by the value of the saliency signal during operation of the camera apparatus with the motivation of select as many as possible the most important video signals from the video data for transmission as suggested by Takahashi (Page 12, ¶ 0154).

**Regarding claim 4**, the combined teaching of Metcalfe in view of Takahashi as discussed and analyzed in claim 1 further teaches that the part includes image selection circuitry for receiving the saliency and image signals and for selectively passing ones of said image signals as determined by said saliency signal (As taught in Metcalfe, the camera receives the saliency signal (LOI) and based on said saliency signal, when reproducing, the camera would select particular images based on the degree of importance as set by the user when recording the images. By teaching that the images with a high LOI would be selected for creating an album or to be printed with high quality further teaches that images that do not have a high LOI would be passed or skipped since only the images with a high LOI would be displayed in the virtual album. Metcalfe as applied reads on “... *said part includes image selection circuitry for*

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*receiving the saliency and image signals and for selectively passing ones of said image signals as determined by said saliency signal*” as written since the display or skip of images is determined based on the LOI set. (See pages 5-7, specifically page 6, line 31 – page 7, line 8)).

**Regarding claim 5**, the combined teaching of Metcalfe in view of Takahashi as discussed and analyzed in claim 1 further teaches that said part comprises the memory (memory 13 in Takahashi), the memory including management circuitry arranged to be responsive to the saliency signal for selectively retaining in said memory images associated with higher saliency levels in preference to images with lower saliency levels (Takahashi further discloses that the images are recorded or transmitted based on the importance level of the image, wherein only images with high importance level can be recorded in order to reduce the amount of use of the recording medium; page 5, ¶ 0094).

**Regarding claim 10**, the combined teaching of Metcalfe in view of Takahashi as discussed and analyzed in claim 1 further teaches a user operable control for picture taking control of the electronic camera (Metcalfe, 111 as shown in fig. 1).

**Regarding claim 11**, Metcalfe discloses that the user control includes a normal picture taking control on the electronic camera (111 as shown in fig. 1).

**Regarding claim 12**, the combined teaching of Metcalfe in view of Takahashi as discussed and analyzed in claim 1 further teaches at least one further physically or mechanically operable user control for generating a corresponding related saliency signal (As shown in Takahashi, figs. 4(b): 109; fig. 9(a): 109, 10: 109a, and 11: 109b, Takahashi discloses the use of a plurality of buttons to select from different auxiliary information to be assigned to the video signal (note that the buttons 109 are physically located on the camera). Furthermore, as shown in figs 23(a) and 23(b), Takahashi further discloses that the auxiliary information can be selected using a monitor, wherein the user can select the person information and the degree of importance of the persons using buttons 103m, 103n, 101m and 101n; page 8, ¶ 0119 (although these buttons are displayed on the touch screen display, the Examiner understands that the buttons are physically located on the camera since they have different physical location on said display)). Grounds for rejecting claim 1 apply here.

**Regarding claim 13**, the combined teaching of Metcalfe in view of Takahashi as discussed and analyzed in claims 1 and 12 further teaches saliency circuitry for combining said saliency signals to form a complex saliency signal (the Examiner is reading the complex saliency signal as the combined information having the persons information and the degree of importance information as shown in Takahashi), the complex saliency signal being the saliency signal for controlling at least a part (The Examiner is reading the part as the display of the camera in Takahashi as discussed in claim 1) of the electronic camera and the saliency signal the memory is arranged to

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store (As discussed in claim 1, Takahashi discloses that the auxiliary information has persons information and degree of importance of said persons and that the auxiliary information is stored with the image signal and further discloses that the camera would also display the auxiliary information on a display screen (As shown in figs. 23, the user would set the auxiliary information and the set auxiliary information would be displayed in the display as shown in figs. 25 and 26 (see persons information and the degree of importance displayed on the display); page 8, ¶ 0118 – page 9, ¶ 0124)) being arranged to be controlled in response to the saliency signal (based on the auxiliary information the display would display the auxiliary information as shown in figs. 25 and 26).

Grounds for rejecting claim 1 and 12 apply here.

**Regarding claim 14**, Metcalfe discloses a saliency circuitry for generating an image related saliency signal in response to said image signal (Metcalfe discloses controlling the reproduction operation of the camera based on the associated saliency signal to the image signal so that when reproducing the image signal with higher importance would be displayed differently from the other image signal. See page 4, line 5 – page 5, line 23; page 6, line 23 – page 7, line 8. Takahashi further discloses reproducing the video based on the importance level of the image, wherein only images with high importance level can be reproduced so that the user can enjoy the recorded work without feeling tired, and the power consumption is reduced to secure more driving time; page 10, ¶ 0131).

**Regarding claim 15**, limitations have been discussed and analyzed in claim 13.

**Regarding claim 16**, Metcalfe discloses circuitry for incorporating said saliency signal in each of said image signals (Metcalfe discloses incorporating said saliency signal (LOI) to each of the frames in the image signal. See page 4, line 5 – page 5, line 23; page 6, line 23 – page 7, line 8).

**Regarding claim 17**, the combined teaching of Metcalfe in view of Takahashi as discussed and analyzed in claims 1 teaches that the user control is part of the camera or is physically attached to the camera body (See Metcalfe, controls in Fig. 1; see also Takahashi buttons 109 as shown in figs. 4(b), 9(b), 10 and 11, and buttons 103m, 103n, 101m, 101n as shown in figs. 23(a) and 23(b)).

**Regarding claim 18**, the combined teaching of Metcalfe in view of Takahashi fails to teach that the user control is a remote control for communication with the camera. However, the Examiner takes Official Notice that the concept of controlling a camera with a remote control is well known in the art at the time the invention was made and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have made the user control of Metcalfe and Takahashi a remote control as opposed to a camera-body integrated control. One would have been motivated to do so because it is well known in the art that by using a remote control to control some elements of a camera, the user does not have to be near the camera to

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send and receive desired signals from the camera. This is particularly advantageous in cases where plural cameras are used or cameras are placed out of the reach of the user (e.g. surveillance cameras), where the remote control would allow the user to send signals to the camera(s) from a separate location, thereby simplifying camera control for the user.

**Regarding claim 19**, Metcalfe discloses that the user control comprises a physically movable control member (pressure button that assign a level of interest of an image signal based on the pressure applied to said button) and a sensor arranged to be responsive to movement of the control member (See page 4, line 27 – page 5, line 4). By teaching a pressure button that assigns a LOI of an image signal based on the pressure applied to the button, Metcalfe discloses a physically movable control member (in this case the pressure button as discussed in Metcalfe) and a sensor arranged to be responsive to movement of the control member since by teaching that the LOI is assigned based on the pressure applied to the button, the use of a sensor to determine the applied pressure in order to assigned the LOI of an image is inherent and necessitated in Metcalfe.

**Regarding claim 20**, the Examiner notes that the limitations “*the user control comprises a pressure or force sensing transducer for deriving the saliency signal that can have values that are continuously variable*”, the elements “pressure” **or** “force sensing transducer” are written as optional elements by using the word “or”.

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Metcalfe discloses that the user control comprises a pressure or force sensing transducer for deriving the saliency signal that can have values that are continuously variable (Metcalfe as applied to claim 19, teaches the use of pressure (pressure button that assign a level of interest of an image signal based on the pressure applied to said button; page 4, line 27 – page 5, line 4) for deriving the saliency signal. By teaching that Metcalfe discloses the use of pressure applied to the button, Metcalfe discloses the use of pressure for deriving the saliency signal as claimed.

**Regarding claim 21**, limitations have been discussed and analyzed in claim 1.

**Regarding claim 23**, limitations have been discussed and analyzed in claim 4.

**Regarding claim 24**, limitations have been discussed and analyzed in claim 3.

**Regarding claim 25**, limitations have been discussed and analyzed in claim 5.

**Regarding claim 28**, limitations have been discussed and analyzed in claim 10.

**Regarding claim 29**, limitations have been discussed and analyzed in claim 11.

**Regarding claim 30**, limitations have been discussed and analyzed in claim 12.



**Regarding claim 31**, limitations have been discussed and analyzed in claim 13.

**Regarding claim 32**, limitations have been discussed and analyzed in claim 13.

**Regarding claim 33**, limitations have been discussed and analyzed in claim 13.

**Regarding claim 34**, limitations have been discussed and analyzed in claim 16.

**Regarding claim 35**, limitations have been discussed and analyzed in claim 17.

**Regarding claim 36**, limitations have been discussed and analyzed in claim 18.

**Regarding claim 37**, limitations have been discussed and analyzed in claim 19.

**Regarding claim 38**, limitations have been discussed and analyzed in claims 19 and 20.

**Regarding claim 40**, claim 40 recites "... one of the saliency signals being a signal that (a) can change in value between at least three different discrete values while the image signal is being produced, or (b) can have values that are continuously variable while the image signal is being produced". It is noted by the Examiner that the term "can" is non-limiting and therefore has not been given patentable weight during

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examination of the claims on their merits. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. MPEP §2106.

The subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:

- (A) statements of intended use or field of use,
- (B) “adapted to” or “adapted for” clauses,
- (C) “wherein” clauses, or
- (D) “whereby” clauses.

This list of examples is not intended to be exhaustive. See also MPEP § 2111.04.

USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted “in view of the specification” without importing limitations from the specification into the claims unnecessarily). In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550- 551

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(CCPA 1969). See also *In re Zletz*, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (“During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow.... The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.”).

Metcalfé discloses an imaging system (See fig. 1) comprising an electronic camera (See fig. 1) for producing an image signal, physically or mechanically operable user controls (See user controls 106, 104, 111, 112, 110 and 108 as shown in fig. 1), the user control being arranged for receiving an input from a user and for generating first saliency signal (Metcalfé discloses the use of button 112 to generate a plurality of saliency signals (Level of interest signals “LOI”) to be associated to the image signal being recorded with the camera) while the image signal is being produced, and saliency circuitry (the camera in Metcalfé inherently has a saliency signal circuitry to generate the saliency signal upon operation of the camera button 112) for storing said first saliency signal (Metcalfé discloses recording the plurality of saliency signals in a memory (tape 120 in fig. 1) in association with the image data; see page 4, line 5 – page 5, line 23; page 6, line 23 – page 7, line 8), the saliency signal being, a signal that (a) can change in value between at least three different discrete values while the image signal is being produced (Metcalfé discloses assigning a level of interest to the image

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data being recorded, wherein the user can variably assign a plurality of level of interest through the capture of the a video sequence; see Fig. 3. This teaches generating a saliency signal that can change in value between at least three different discrete values while the image signal is being produced), or (b) can have values that are continuously variable while the image signal is being produced (Metcalf discloses assigning a level of interest to the image data being recorded, wherein the user can variably assign a plurality of level of interest through the capture of the a video sequence; see Fig. 3. This teaches generating a saliency signal that can have values that are continuously variable while the image signal is being produced), a memory (120 as shown in fig. 1) arranged for storing the image signal and the saliency signal in response to the saliency signal (page 4, lines 5-13; page 5, lines 4-35), operation of at least part of the electronic camera being arranged to be controlled in response to the saliency signal (as discussed in page 6, line 31 – page 7, line 8, Metcalfe discloses that the saliency signal (LOI signal stored in memory 120) can be used to control the reproduction of the images (i.e. printing, creating thumbnail files for photo albums, etc.)) (See page 4, line 5 – page 5, line 23; page 6, line 23 – page 7, line 8).

Metcalf does not explicitly disclose at least two physically or mechanically operable user controls, each of the user controls for generating first and second saliency signals; that said saliency circuitry combines said first and second saliency signals to form a complex saliency signal; that the operation of at least part of the electronic camera being arranged to be controlled in response to the complex saliency signal.

However, Takahashi discloses an electronic camera (See figs. 4(a), 4(b), 8, 9(a), 9(b), 10, and 11) producing image signal, comprising a user operable picture taking control (shooting button 104) for selectively activating the electronic camera to take pictures, and at least two physically or mechanically operable user controls (As shown in Takahashi, figs. 4(b): 109; fig. 9(a): 109, 10: 109a, and 11: 109b, Takahashi discloses the use of a plurality of buttons to select from different auxiliary information (which the Examiner is interpreting as the saliency information) to be assigned to the video signal (note that the buttons 109 are physically located on the camera). Furthermore, as shown in figs 23(a) and 23(b), Takahashi further discloses that the auxiliary information can be selected using a monitor, wherein the user can select the person information and the degree of importance of the persons using buttons 103m, 103n, 101m and 101n; page 8, ¶ 0119 (although these buttons are displayed on the touch screen display, the Examiner understands that the buttons are physically located on the camera since they have different physical location on said display)). Takahashi further discloses the use of a pressure sensor 109a and sweat sensor 109b to determine the auxiliary information related to the image data (page 6, ¶ 0112 – page 7, ¶ 0114). Also Takahashi discloses that the auxiliary information includes information related to the persons (i.e. son, daughter, friend, father, mother) and a degree of importance of said persons appearing in the image data (see figs. 23(a) and 23 (b); page 8, ¶ 0117 - page 9, ¶ 0124)) for receiving an input from a user and for generating, in response to the input from the user a saliency signal (auxiliary information having information such as persons information and degree of importance of the persons in the image) that (a) can

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change in value between at least three different discrete values while the image signal is being produced (as shown in figs. 23(a) and 23(b), the persons information and degree of importance of the persons in the image can change in value between a plurality of values (i.e. three or more values as claimed)), or (b) can have values that are continuously variable while the image signal is being produced (the auxiliary information can be changed during the capture of the image signal), and saliency circuitry for combining said saliency signals to form a complex saliency signal (the Examiner is reading the complex saliency signal as the combined information having the persons information and the degree of importance information as shown in Takahashi), the complex saliency signal being the saliency signal for controlling at least a part (The Examiner is reading the part as the display of the camera in Takahashi as discussed in claim 1) of the electronic camera and the saliency signal the memory is arranged to store (As discussed in claim 1, Takahashi discloses that the auxiliary information has persons information and degree of importance of said persons and that the auxiliary information is stored with the image signal and further discloses that the camera would also display the auxiliary information on a display screen (As shown in figs. 23, the user would set the auxiliary information and the set auxiliary information would be displayed in the display as shown in figs. 25 and 26 (see persons information and the degree of importance displayed on the display which the examiner is reading as the complex saliency signal generated) (This teaches performing an operation ); page 8, ¶ 0118 – page 9, ¶ 0124)) being arranged to be controlled in response to the saliency signal (based on the auxiliary information the display would display the auxiliary information as

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shown in figs. 25 and 26). Therefore Takahashi discloses at least two physically or mechanically operable user controls, each of the user controls for generating first and second saliency signals; that said saliency circuitry combines said first and second saliency signals to form a complex saliency signal; that the operation of at least part of the electronic camera being arranged to be controlled in response to the complex saliency signal as claimed. Having a plurality of operation controls to generate different saliency signals to be combined into a single complex saliency signal to control the display operation of the camera is advantageous because it would provide the user with a user friendly interface that would allow changing the degree of importance of the images being captured and would also allow the user to be aware of the information being added to the image data.

Therefore, taking the combined teaching of Metcalfe in view of Takahashi as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of having the camera with a plurality of operation controls to generate different saliency signals to be combined to control the operation of the display to further displaying the combined saliency signal being assign to the image data as taught in Takahashi to modify the teaching of Metcalfe to have at least two physically or mechanically operable user controls, each of the user controls for generating first and second saliency signals; that said saliency circuitry combines said first and second saliency signals to form a complex saliency signal; that the operation of at least part of the electronic camera being arranged to be controlled in response to the complex saliency signal. The motivation to do so would have been to provide the user

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with a user friendly interface that would allow changing the degree of importance of the images being captured and would also allow the user to be aware of the information being added to the image data.

**Regarding claim 42**, Metcalfe discloses a separate user operable picture taking control for selectively activating the electronic camera to take pictures (See button 111 as shown in fig. 1).

**Regarding claim 54**, claim 54 recites “an electronic camera having a picture taking control for selectively activating the camera to derive input picture signals, the electronic camera further including a user operable control for generating a saliency signal capable of having plural values and a buffer for receiving the input picture signals and having a capacity for the input picture signals determined in response to the value of the saliency signal”. It is noted by the Examiner that the term “capable of”. It is noted by the Examiner that the term "capable of" is non-limiting and therefore has not been given patentable weight during examination of the claims on their merits. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. MPEP §2106.

The subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the



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language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:

- (A) statements of intended use or field of use,
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This list of examples is not intended to be exhaustive. See also MPEP § 2111.04.

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unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process”).

Furthermore, it has been held that the recitation that an element is "capable of" performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

Metcalf discloses an apparatus (See fig. 1) comprising an electronic camera (See fig. 1) having a picture taking control (button 111 as shown in fig. 1) for selectively activating the camera to store an image to a memory (Fig. 1: 120), the camera further including a user operable control (button 112 as shown in fig. 1) for generating a non-playback saliency signal (the saliency signal generated in Metcalfe is a level of interest signal to indicate portion of the image signals that have certain degree of interest to be stored in the memory 120 in association with the saliency signal) and picture selection circuitry (circuitry is inherent in the Metcalfe reference to control the recording and reproduction of the video signals stored in the memory 120) for selectively passing the picture signals in response to the saliency signal (Metcalf discloses that the user can select a saliency signal (LOI) to a particular image being captured, the saliency signal is stored in association with the image (See pages 5-7). Metcalfe further discloses that based on the stored saliency signal, the images would be reproduced, wherein when reproducing, the camera would select particular images based on the degree of importance (LOI) as set by the user when recording the images (See pages 5-7; page 6, line 31 – page 7, line 8)). By teaching that the images with a high LOI would be

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selected for creating an album or to be printed with high quality further teaches that images that do not have a high LOI would be passed or skipped since only the images with a high LOI would be displayed in the virtual album. Metcalfe as applied reads on the limitations “... *picture selection circuitry for selectively passing the picture signals in response to the saliency signal* ...” since the display or skip of images is determined based on the saliency signal (LOI)), the saliency signal being capable of having more than two values (As discussed by Metcalfe, the operation of the button 112 would automatically generate a plurality of saliency signals, wherein when operating the button 112, if the button is set to be controlled by pressing it a plurality of times, it would represent creating a first plurality of saliency signals that would generate the plurality of saliency signals to be associated to the image signal when recording into the memory 120) (See page 4, line 5 – page 5, line 23; page 6, line 23 – page 7, line 8).

Although Metcalfe discloses selectively passing the image signals during reproduction of the video based on the saliency signal, Metcalfe does not explicitly disclose selectively passing the image to the memory in response to the saliency signal.

However, Takahashi discloses an electronic camera (See figs. 4(a), 4(b), 8, 9(a), 9(b), 10, and 11) producing image signal, comprising a user operable picture taking control (shooting button 104 as shown in fig. 4 (b)) for selectively activating the electronic camera to take pictures for further recording or transmission (Takahashi discloses that the captured image data would be either recorded or transmitted to another device (See page 5, ¶ 0094-0097)), and an additional operable user control (Takahashi discloses the use of buttons 109 to set auxiliary information (which the

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Examiner is interpreting as the saliency information) related to the image data being captured; page 6, ¶ 0106. Takahashi further discloses the use of a pressure sensor 109a and sweat sensor 109b to determine the auxiliary information related to the image data (page 6, ¶ 0112 – page 7, ¶ 0114). Also Takahashi discloses that the auxiliary information includes information related to the persons (i.e. son, daughter, friend, father, mother) and a degree of importance of said persons appearing in the image data (see figs. 23(a) and 23 (b); page 8, ¶ 0117 - page 9, ¶ 0124)) for receiving an input from a user and for generating, in response to the input from the user a saliency signal (auxiliary information having information such as persons information and degree of importance of the persons in the image) that (a) can change in value between at least three different discrete values while the image signal is being produced (as shown in figs. 23(a) and 23(b), the persons information and degree of importance of the persons in the image can change in value between a plurality of values (i.e. three or more values as claimed)), or (b) can have values that are continuously variable while the image signal is being produced (the auxiliary information can be changed during the capture of the image signal), operation of at least a part of the camera apparatus while the electronic camera is activated to take pictures (Takahashi discloses recording the auxiliary information and further discloses that the camera would also display the auxiliary information on a display screen (As shown in figs. 23, the user would set the auxiliary information and the set auxiliary information would be displayed in the display as shown in figs. 25 and 26; page 8, ¶ 0118 – page 9, ¶ 0124)) being arranged to be controlled in response to the saliency signal (based on the auxiliary information the

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display would display the auxiliary information as shown in figs. 25 and 26). Also, Takahashi teaches that the important images from a captured video can be extracted so that only scenes of high degrees of importance can be efficiently recorded or transmitted as compared with the case where all of the shot scenes are stored or transmitted and that the extraction of the scenes of high degrees of importance may be carried out during or after shooting of the scenes (See page 5, ¶ 0094; page 10, ¶ 0130) (This teaches the concept of selectively passing the image to the memory in response to the saliency signal as claimed since the image signals would be either recorded or transmitted based in the priority given to the scenes so that only important scenes are transmitted or recorded while said scenes are being captured).

Therefore, taking the combined teaching of Metcalfe in view of Takahashi as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of selectively recording image data in a memory in response to an assigned priority to scenes in the image data as taught in Takahashi to modify the teaching of Metcalfe to selectively pass the image to the memory in response to the saliency signal. The motivation to do so would have been to reduce the amount of use in the recording medium and reduce the communication costs as suggested by Takahashi (Page 5, ¶ 0094).

**Regarding claim 56**, limitations have been discussed and analyzed in claim 54.

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**9. Claims 2, 7, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Metcalfe, AU 743216 B in view of Takahashi, US 2002/0041757 A1 and further in view of Matsumoto et al., US Patent 6,795,642 B2.**

Regarding claim 2, although Takahashi teaches that a compression circuitry (See Takahashi, fig. 1: 15; page 5, ¶ 0097; page 6, ¶ 0105) for receiving the image signals and for compressing the image signals and that although the invention is described on the premise that a shot picture is recorded, a shot picture is not necessarily recorded, and it can be used also when compressed video and audio data are transmitted as they are to be used on a network or the like (page 10, ¶ 0130), the combined teaching of Metcalfe in view of Takahashi fails to teach compressing the image signals to an extent determined by the saliency signal.

However, Matsumoto et al. teaches the concept of having a video recording apparatus (Fig. 2) of a surveillance system, recording video data captured by an electronic camera (See fig. 1), wherein when an alarm is activated, the importance of the video is determined to be high as compared to when the alarm is not activated (Col. 3, lines 46-67). Matsumoto et al. further discloses that based on the degree of importance given to the video signal, the data compression is also adjusted (i.e. if the importance degree of the video is low, it would be compressed at high level and if the importance degree of the video is high, said video would be compressed at low level) (Col. 3, line 15 – col. 4, lines 19). Matsumoto also discloses that the importance level can also be adjusted by the user operating the surveillance system (Col. 7, lines 22-34). Matsumoto et al. further discloses that by adjusting the compression of the video being

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captured, it is possible to record the monitoring image data having a high degree of importance as much as possible (Col. 7, lines 35-43).

Therefore, taking the combined teaching of Metcalfe in view of Takahashi and further in view of Matsumoto et al. as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the concept of adjusting the compression of a video captured by an electronic camera based on a degree of importance assigned to the video as discussed in Matsumoto et al. to modify the teaching of Metcalfe and Takahashi by compressing the image signals to an extent determined by the saliency signal. The motivation to do so would have been to record the monitoring image data having a high degree of importance as much as possible as suggested in Matsumoto et al.

**Regarding claim 7**, the combined teaching of Metcalfe in view of Takahashi as discussed and analyzed in claims 1 and 2 further teaches that said part comprises the memory (memory 13 in Takahashi), including management circuitry arranged to be responsive to the saliency signal for selectively retaining in said memory images associated with higher saliency levels in preference to images with lower saliency levels (Takahashi further discloses that the images are recorded or transmitted based on the importance level of the image, wherein only images with high importance level can be recorded in order to reduce the amount of use of the recording medium; page 5, ¶ 0094).

**Regarding claim 22**, limitations have been discussed and analyzed in claim 2.

**10. Claims 51-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, US 2002/0041757 A1.**

**Regarding claim 51**, claim 51 recites “an electronic camera having a picture taking control for selectively activating the camera to derive input picture signals, the electronic camera further including a user operable control for generating a saliency signal capable of having plural values and a buffer for receiving the input picture signals and having a capacity for the input picture signals determined in response to the value of the saliency signal”. It is noted by the Examiner that the term “capable of”. It is noted by the Examiner that the term "capable of" is non-limiting and therefore has not been given patentable weight during examination of the claims on their merits. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. MPEP §2106.

The subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:



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- (A) statements of intended use or field of use,
- (B) “adapted to” or “adapted for” clauses,
- (C) “wherein” clauses, or
- (D) “whereby” clauses.

This list of examples is not intended to be exhaustive. See also MPEP § 2111.04.

USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted “in view of the specification” without importing limitations from the specification into the claims unnecessarily). In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550- 551 (CCPA 1969). See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (“During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow.... The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.”)

Furthermore, it has been held that the recitation that an element is "capable of" performing a function is not a positive limitation but only requires the ability to so

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perform. It does not constitute a limitation in any patentable sense. In re Hutchison, 69 USPQ 138.

In a first embodiment, Takahashi discloses an apparatus comprising an electronic camera (See figs. 4(a), 4(b), 8, 9(a), 9(b), 10, and 11) having a picture taking control (shooting button 104 as shown in fig. 4 (b)) for selectively activating the camera to derive input picture signals, the electronic camera further including a user operable control for generating a saliency signal (Takahashi discloses the use of buttons 109 to set auxiliary information (which the Examiner is interpreting as the saliency information) related to the image data being captured; page 6, ¶ 0106. Takahashi further discloses the use of a pressure sensor 109a and sweat sensor 109b to determine the auxiliary information related to the image data (page 6, ¶ 0112 – page 7, ¶ 0114). Also Takahashi discloses that the auxiliary information includes information related to the persons (i.e. son, daughter, friend, father, mother) and a degree of importance of said persons appearing in the image data (see figs. 23(a) and 23 (b); page 8, ¶ 0117 - page 9, ¶ 0124)) capable of having plural values (as shown in figs. 23(a) and 23(b), the persons information and degree of importance of the persons in the image can change in value between a plurality of values).

In said first embodiment, Takahashi does not explicitly disclose a buffer for receiving the input picture signals and having a capacity for the input picture signals determined in response to the value of the saliency signal.

However, in a further embodiment Takahashi discloses the concept of determining the amount of data to be transmitted based on the cost of transmission

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service; wherein the allowed length of data (L) is determined and compared to the amount of data to be transmitted, if the amount of data to be transmitted the apparatus would select video section with a priority higher than a threshold value. If after selecting those video with the priority higher than a threshold, the length of data still more than the allowed length, the apparatus would increase the priority threshold, however, if the length is less than the allowed length, the video signals are transmitted (Page 12, ¶ 0151-0154). By teaching adjusting the amount of data to be transmitted based on the length allowed for transmission and also based on the priority of the video signals to be transmitted, Takahashi inherently discloses “a buffer for receiving said image signal, the buffer having a capacity arranged to be controlled by the value of the saliency signal during operation of the camera apparatus” as claimed since the amount being adjusted in the apparatus needs to be in a particular buffer or memory prior to transmission in order to properly select the video signals with higher priority). Takahashi further discloses that by adjusting the amount of data to be transmitted based on the length allowed for transmission and also based on the priority of the video signals to be transmitted the camera may select as many as possible the most important video signals from the video data for transmission (Page 12, ¶ 0154).

Therefore, taking the combined teaching of the first and the further embodiments in Takahashi, one of an ordinary skill in the art would have found obvious at the time the invention was made to apply the concepts of adjusting the amount of data to be transmitted based on the priority set to the video signals to further modify the camera apparatus to have a buffer for receiving said image signal, the buffer having a capacity

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arranged to be controlled by the value of the saliency signal during operation of the camera apparatus with the motivation of select as many as possible the most important video signals from the video data for transmission as suggested by Takahashi (Page 12, ¶ 0154).

**Regarding claim 52**, limitations have been discussed and analyzed in claim 51.

**Regarding claim 53**, limitations have been discussed and analyzed in claim 51.

### ***Conclusion***

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

***Contact***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NELSON D. HERNANDEZ whose telephone number is (571)272-7311. The examiner can normally be reached on 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lin Ye/  
Supervisory Patent Examiner, Art Unit 2622

NDHH  
May 27, 2009